

What we'd like to know about longitudinal beam parameters

parameter	avg	indiv	accuracy	rate	comments	avail
Bunch length	yes	yes	1% (0.02ns)	1 sec	RMS, Gaussian	Yes
Bunch emittance	yes	yes	2% (0.08eVs)	1 sec	95% Alvin; rms	Yes?
Inj. oscill dE,dj RF	yes	yes	1MeV/1 deg	event	BLT	Yes?
Centroid wrt RF	yes	yes	0.1ns	1 sec		Yes
Relative timing	yes	no	0.2ns	1 sec	Pbar wrt p, alarm	?
Oscillation ampl	yes	yes	0.1ns (2 deg)	1 sec	From dampers ?	No?
Oscill frequency	yes	no	2% (1e-5)	15sec	Tunefitter ?	No?
Bunch intensity	yes	yes	1% , 0.3e9	1 sec		Yes
Satellites intens	yes	yes	10%	15sec	WideGate/NG	Yes?
Shape type	yes	no	???	1 sec	figure of merit ?	No
Tomography	no	select	5%	event		No
RF Phase noise	yes	cavity	10mrad	1 sec	J.Reid, 5-100 Hz	No